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MESSAGE FROM THE ACTING EXECUTIVE ASSOCIATE DIRECTOR FOR MITIGATION

The Flood Mitigation Assistance (FMA) program has evolved significantly since 1997 in response to the Agency's specific emphasis on reducing the number of National Flood Insurance Program (NFIP)-insured repetitive loss structures and associated claims payments. Program guidance issued in FY 1999 encouraged States to target FMA funds towards NFIP-insured repetitive loss structures with four or more losses, reducing the number of NFIP-insured repetitive loss structures. Furthermore, the FY 1999 guidance encouraged States to prioritize planning grant applications from their highest repetitive loss communities, focusing on getting plans approved for communities prior to the submittal of project grant applications. Also, States and communities were encouraged to develop flood mitigation plans that address both present and future repetitive loss areas.

In FY 2000, the focus of FMA continues to be reducing the number of repetitive loss structures insured by the NFIP. More specifically, the emphasis is on addressing the target repetitive loss properties identified in the FEMA Repetitive Loss Strategy. These include structures with four or more losses and structures with two to three losses, where the cumulative payments have exceeded the property value. FEMA ranked the approximately 10,000 target properties based on frequency of the claims and severity of the losses. This list has been provided to each FEMA region and State. States and communities are encouraged to use this list as a guide for targeting project grants, because they represent the properties at the highest risk of flooding.

FMA has worked to create partnerships with other Federal, State, and local programs and with non-profit organizations to encourage local mitigation. FEMA is working with Project Impact communities with large numbers of repetitive losses and encouraging them to include strategies to address those losses in their Memorandums of Agreement. Many Project Impact communities already have initiatives underway to address repetitive losses. In addition, FMA resources are often combined with those of the FEMA Hazard Mitigation Grant Program (HMGP) in order to fund large-scale elevation or acquisition projects.

This report highlights stories about individuals and families affected by repetitive flooding and provides examples of how FMA helped these people elevate or relocate their homes to reduce their risk of future flooding. Based on these experiences, I am convinced that hazard mitigation works, and FMA has been successful in integrating environmental protection, economic prosperity, and social well-being to help States and communities realize the best vision: that of being safer, stronger, and more sustainable places in which to live.

*Margaret E. Lawless
Acting Executive Associate Director
for Mitigation*

EXECUTIVE SUMMARY

In 1994, Congress enacted the National Flood Insurance Reform Act. This Act created the first significant pre-disaster opportunities for mitigation. Section 1366 of the Act authorizes a Mitigation Assistance Program that FEMA has since designated the Flood Mitigation Assistance (FMA) program. The FMA program provides grants and technical assistance for mitigation projects that reduce the risk of repetitive flood damages to structures.

Section 1367(d) requires FEMA to submit to Congress a report that describes activities carried out under FMA through the National Flood Mitigation Fund and any activities carried out with amounts from the Fund. This report meets this requirement. This report supersedes the first FMA Biennial Report submitted to Congress on May 28, 1998. However, much of the financial and program data referred to in the report covers a 4-year timeframe due to the relative newness of the program.

Significant FMA advancements are being made in the following six areas:

- Section I: Target NFIP Repetitive Loss Properties
- Section II: Grant Distribution
- Section III: Promote Partnerships
- Section IV: Training
- Section V: Outreach
- Section VI: Data Collection and Tracking

I. TARGET NFIP REPETITIVE LOSS PROPERTIES

- Revised program guidance to increase the emphasis on NFIP Repetitive Loss Properties.
- Implemented strategies that target those (approximately) 10,000 of the worst of these repetitive loss properties.
- Targeted FMA to maximize mitigation opportunities.
- Since 1997, 335 NFIP repetitive loss structures have been approved for acquisition, relocation, or elevation with FMA funds.



II. GRANT DISTRIBUTION

(Data are cumulative from 1997 through 2000.)

- Awarded 159 planning grants to 44 states and territories. Eighty-three of these have resulted in FEMA approved flood mitigation plans. Flood mitigation plans which have been approved by FEMA have gone through an extensive six-step process. This includes: 1) public involvement; 2) coordination with other agencies and organizations; 3) a flood-hazard area inventory; 4) problem identification; 5) review of possible mitigation actions; and 6) State and local adoption following a public hearing once states or communities have in place a FEMA-approved flood mitigation plan, they are eligible to apply for FMA project grant funds.
- Awarded 255 project grants and 44 technical assistance grants to 49 states and territories. Types of projects include the acquisition, relocation, or elevation of NFIP-insured structures and minor structural projects such as stormwater retention basins, streambank stabilization, as well as dry floodproofing of commercial structures.



III. PROMOTE PARTNERSHIPS

- Established a landmark Memorandum of Understanding between FEMA and the Florida Division of Emergency Management that makes Florida the first FMA Managing State.
- Partnered with non-profit and professional organizations such as the National Emergency Management Association (NEMA) and the Association of State Floodplain Managers (ASFPM) to develop a National Repetitive Loss Strategy, and to review the process of allocating FMA funds to State and local governments.
- Partnered with the American Planning Association (APA) to reward the Town of Kinsley, Kansas, for developing an exemplary comprehensive plan that addresses community flood hazards.



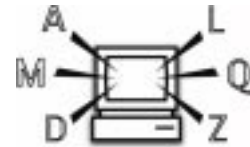
IV. TRAINING

- Delivered training to regional, State, and local personnel, including:
 - FMA Coordinators Meeting for Regional Managers
 - Regional FMA and Floodplain Management Meetings for State Points of Contact
 - NEMIS FMA Database Training for Regional and State Contact
 - Consolidated Historical and Environmental Compliance Training
 - Benefit-Cost Training
 - Grants Administration Training
 - Property Acquisition Training



VI. DATA COLLECTION AND TRACKING

- Improved the National Emergency Management Information System (NEMIS) database to better support FMA program objectives.
- Initiated a Joint Review, with the FEMA Office of the Inspector General, of Local Mitigation Planning to identify best planning practices of high achieving communities, and to translate these practices into other communities.
- Documented nationwide FMA success stories. The FMA funds have strengthened and protected communities across our country. In these stories, you will read testimony from Americans who have benefited. Their voices speak loudest of all to celebrate the success of this pre-disaster mitigation program.



V. OUTREACH

- Created and implemented the National Fellowship Program.
 - Under separate funding sources, a national fellowship program was established to promote and support the integration of natural hazard mitigation into professional planners' education and work. In 2000, two fellowships were awarded through a national competition. These fellows are working actively with communities to develop plans and identify opportunities for projects under FMA and HMGP.
- Developed state-of-the-art Mitigation Planning Tools that include:
 - State Mitigation Planning Checklist
 - Guidebook for Post-Disaster Recovery Planning developed with the American Planning Association (APA)
 - Model Natural Hazard Element for American Planning Association's Growing Smart Initiative
 - Mitigation Recovery Exercise for Flood, Hurricane, and Earthquake Hazards
 - Long-Term Recovery Action Plans
 - Project Impact Guidebook
 - Project Impact Toolkit
 - Planning for a Sustainable Future: The Link Between Hazard Mitigation and Livability
 - Rebuilding for a More Sustainable Future: An Operational Framework
- Provided information and established outreach programs.
 - Educated the public on hazard mitigation measures.
 - Increased awareness of hazard mitigation grant availability.



I. TARGET NFIP REPETITIVE LOSS PROPERTIES

NFIP Repetitive Loss Strategy

The *National Flood Insurance Program Repetitive Loss Strategy* is a combined effort between FEMA's Mitigation Directorate and the Federal Insurance Administration (FIA) to identify properties throughout the country that are most at risk for repeat flooding, and to reduce their flood exposure through targeted buyouts, relocation, and elevation. FMA is a key resource toward achieving this goal.

Defining Repetitive Loss Properties

A repetitive loss building is defined in this report as one that has had at least two insured losses in any 10-year period since 1978. As of September 1999, there were cumulatively 253,000 losses totaling \$3.8 billion paid on 91,000 repetitive loss properties. They account for about one-third of all NFIP losses.

Many of these repetitive loss properties are not currently insured. Some of these properties have already had structural or non-structural mitigation actions taken. Of these, some have been acquired and removed while others have been elevated or floodproofed. Others may have dropped insurance coverage for economic or coverage reasons. It is estimated that 45,638 repetitive loss properties are currently insured. These buildings are projected to cost the program \$200 million per year. New repetitive loss properties continue to emerge each year.

Targeting Insured Repetitive Loss Properties

FEMA has identified target buildings that *are* currently insured and have the greatest risk. There are 8,753 buildings with four or more losses, and 1,160 buildings with two or three losses that exceed building value. Although most target buildings are single-family residences, 25 percent of the dollar losses are to non-residential buildings. FEMA regional offices are making this information available to all who are involved with reducing losses.

States with the highest number of target buildings include:

	<u># of Buildings</u>
▪ Louisiana	2,838
▪ Texas	1,134
▪ New Jersey	1,020
▪ North Carolina	594
▪ Florida	574
▪ New York	509

Targeting Insured Repetitive Loss Properties

Projections show that these buildings will cost the NFIP over \$80 million per year if the buildings are not mitigated (more than \$8,000 per building, per year). These properties will cost an estimated average of \$57,500 to acquire, relocate, or floodproof (Federal share is \$43,125 at a 75/25 cost share). The projected mitigation costs assume that half the buildings will be acquired or relocated and half will be elevated or floodproofed.

FEMA will continue to work with our State partners to effectively use HMGP funds to mitigate target properties. FEMA has been providing States with insurance data on the location of and risk to their repetitive loss properties to help them identify candidate areas for FMA and HMGP projects. FEMA will continue to explore other funding and delivery mechanisms to address repetitive losses. Systems are being developed to track progress in mitigating these repetitive loss structures.

Insuring Repetitive Loss Properties

Properties that fall in the target group (currently insured properties with two to three losses greater than building value or that have four or more losses) will be placed in an NFIP Special Direct Facility (SDF). This will allow FEMA greater control in providing insurance, adjusting losses, gathering risk information, and tracking offers of mitigation assistance. These policies will only be renewed through the SDF, where risk information can be collected. Data will include an elevation certificate and digital photographs.

Adding Community Incentives

Under the NFIP Community Rating System (CRS), credits have been increased for acquisition, relocation, and retrofitting of floodprone properties with bonuses added for addressing repetitive loss buildings. Communities that have 10 or more repetitive loss properties are required to address these and other at-risk structures for mitigation options in a floodplain management plan. The CRS provides premium discounts in communities that exceed NFIP minimum requirements.

FEMA is working with Project Impact communities with large numbers of repetitive losses to include strategies to address those losses in their Memorandums of Agreement. Many Project Impact communities already have initiatives underway to address repetitive losses.



II. GRANT DISTRIBUTION

FMA awards money through Project and Technical Assistance Grants or as Planning Grants.

Project and Technical Assistance Grants

FMA project grants are used to assist States and communities in implementing flood mitigation projects to reduce the risk of flood damage to structures insured or insurable under the National Flood Insurance Program. Funds may be used by communities to acquire, elevate, and/or relocate properties that have experienced repeated flood damage in order to make communities stronger and more disaster resistant. Only mitigation activities specified in FEMA-approved flood mitigation plans are eligible for an FMA project grant.

Since 1997, \$71.5 million has been allocated for FMA projects. Ten percent of this money may be used by States for technical assistance. The appendix to this report presents FMA allocations for FY 1997 to 2000. From FY 1997 through 1999, FMA project funds were used for a broad variety of projects. Since FY 1999, States have been encouraged to award project grants primarily to those projects that address repetitive loss structures that have experienced four or more insured losses, or two to three losses that have exceeded the property's current fair market value.

Table 1: FMA Project and Technical Assistance Grant Allocations

FISCAL YEAR	ALLOCATION
1997	\$16,000,000
1998	\$18,500,000
1999	\$18,500,000
2000	\$18,500,000
<hr/>	
TOTAL	\$71,500,000

Planning Grants

FEMA strongly advocates both State and local mitigation planning. Planners are encouraged to use a strategic approach drawing from the experiences of States that are successfully integrating local and State mitigation planning efforts into programs that reinforce each other. FMA funds primarily support the development of local plans that focus on flood hazards in specific communities. States have also used FMA funds to develop comprehensive flood hazard plans, including repetitive loss and multi-jurisdictional plans that reach beyond a single community.

A key approach for State and local planners is integrating hazard mitigation with the concept of sustainability. While the concept of sustainability has many different dimensions, one important aspect is efficient land use. Sustainable communities often make land-use decisions that promote open-space planning by including greenways, parks, and landscaping. Preserving the integrity of biological and physical systems is the most important environmental indicator of sustainability. This involves limiting degradation of the environment and preserving natural systems—such as wetlands, floodplains, dunes, and active fault or landslide zones—that increase a community's resilience to natural hazards. This concept has particular applicability to multi-objective floodplain management planning. It was implemented on a broad scale during recovery efforts following the 1993 Great Midwest Floods, and is being applied to communities recovering from Hurricane Floyd. FEMA encourages all floodprone communities to link mitigation planning and sustainable development in both pre-disaster planning and post-disaster recovery planning.

Planning Grants

Since 1997, \$6 million has been allocated for FMA planning grants. During that time period, 159 planning grants in 44 States and communities have produced 83 FEMA-approved Flood Mitigation Plans.

Table 2 presents FMA planning grant allocations for FY 1997 to 2000. Since FY 1999, States have been encouraged to award planning grants to communities with the highest number of repetitive loss structures.

<i>Table 2: FMA Planning Grant Allocations and Obligations</i>	
<u>FISCAL YEAR</u>	<u>ALLOCATION</u>
FY 1997	\$1,500,000
FY 1998	\$1,500,000
FY 1999	\$1,500,000
FY 2000	\$1,500,000
<hr/>	
TOTAL	\$6,000,000

Because FMA planning grant funds are 2-year funds, States and communities are still in the process of making obligations for FY 1999 and 2000.



III. PROMOTE PARTNERSHIPS

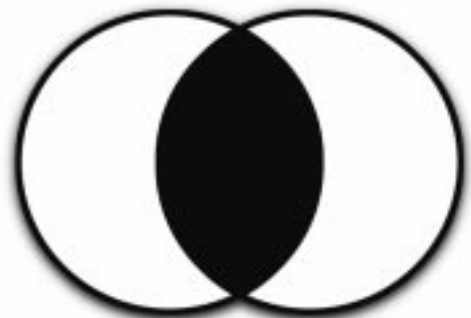
Piloting the Managing State Concept

A landmark Memorandum of Understanding (MOU) between FEMA and the Florida Division of Emergency Management (FDEM) builds a collaborative partnership for implementing the HMGP and FMA. The Managing State arrangement will be beneficial to both FEMA and Florida. Under this arrangement, the State will review each project application for eligibility, and FEMA will review project summaries for compliance with program requirements and conduct environmental review. This arrangement is intended to result in faster approval of projects and thus make it easier to meet the programmatic goal of expediting the obligation of grant funds. In FY 2001, North Carolina will become a Managing State, with other FEMA Region IV States preparing to follow.

FEMA will review the allocations and grants obligation process again in FY 2001 in partnership with NEMA and ASFPM. That meeting will focus on reviewing the allocations formula, setting goals for obligating FMA funds within a 1-year time period, and improving State and local project management capabilities.

Fostering Cooperation With Stakeholders

Several meetings were conducted in 1998 and 1999, in partnership with the National Emergency Management Association (NEMA) and the Association of State Floodplain Managers (ASFPM), to review the FMA allocations formula. The conclusion of these meetings supported the continuation of the present FMA allocations formula in combination with the use of currently insured counts of repetitive loss structures. Under this formula, each State and territory receives a base amount of \$10,000 for Planning, and \$100,000 for Projects. The remaining funds are distributed based on the number of NFIP policies, currently insured repetitive loss structures, and other such criteria as the Director may determine in furtherance of the disaster-resistant community concept.



IV. TRAINING

FEMA has completed a variety of training activities that support the FMA program.

FMA Coordinators Meetings: Three FMA Coordinators meetings were conducted, in September 1998, 1999, and 2000. All regional contacts participated in these meetings along with headquarters staff. The purpose of these annual meetings is to provide training on grants management, project implementation, planning, repetitive loss and target properties, environmental review, benefit cost analysis, other flood policy issues, and data and financial tracking.

NEMIS Training: Joint training is conducted at the FEMA Emergency Management Institute (EMI) on an annual basis on the NEMIS Mitigation Module that includes both FMA and HMGP modules. This training is conducted in a train-the-trainer format and is intended for regional and State staff who implement these programs.

Consolidated Historical and Environmental Compliance Training: This course provides regional and State staff with necessary background to review mitigation projects for compliance with National Environmental Protection Act (NEPA) requirements. The course, as well as courses on benefit-cost analysis and grants administration, are generally offered at EMI or various field locations depending on regional needs and disaster requirements.

Benefit-Cost Training: A beginners course is available on benefit-cost analysis for mitigation projects. The goal of this course is to ensure that regional and State staff can effectively review mitigation projects for required benefit-cost criteria.

Grants Administration: This course provides instruction to regions, States, and local staff involved with the implementation of FMA and HMGP, to effectively administer mitigation grants, including project identification, filing applications, auditing, and close-out.

Property Acquisition Training for States: EMI will pilot a course on how to effectively manage property acquisition projects in the pre- and post-disaster environment. The *Property Acquisition Handbook for Local Communities, FEMA Publication 317 (October 1998)* is also a practical training tool.



V. OUTREACH

Establishing a Planning Fellowship

During FY 2000, FEMA initiated the sponsorship of a graduate-level fellowship in hazard mitigation planning. Each planning fellow will support a selected community through developing or updating a plan, and help familiarize the community with planning resources such as FMA, HMGP, and Project Impact. Two students were selected in the summer of 2000. Both students, along with their sponsoring faculty members, will produce papers based upon their field experiences. The papers will make the following recommendations:

- How to best assist States and communities in developing and maintaining effective mitigation plans.
- How to incorporate hazard mitigation into local government planning programs.

These field assessments will also provide FEMA with critical feedback on ways to improve the implementation of key programs such as FMA and HMGP.

The first recipient is working with nine Project Impact communities in the Upper Mystic River Watershed, located northwest of Boston. His goals are to help these communities better integrate flood mitigation planning into their local ordinances, land use patterns, and community development plans. The second recipient of the fellowship works in another Project Impact community—Escambia County, Florida, located in the Florida Panhandle. Her goals are the same; however, she will place a stronger emphasis on hurricane mitigation.

Developing Mitigation Planning Tools

The table on the following page describes tools and resources for State-local partnerships in mitigation planning. These tools have been designed by FEMA to assist States in developing and reviewing plans. These products may be used as a basis for dialogue with States on how they can create strategic relationships between State and local mitigation planning.



Mitigation Planning Tools

State Mitigation Planning Checklist: The checklist is used by FEMA or State staff to review and approve State Mitigation Plans in accordance with the Stafford Act, and may be used to assist local communities in developing local mitigation plans.

Planning for Post-Disaster Recovery and Reconstruction: This American Planning Association (APA) report provides guidance to community planners on how to use planning processes and tools for incorporating mitigation into post-disaster recovery and reconstruction. Hands-on tools are being developed to assist communities in initiating a planning approach to disaster recovery.

Model Natural Hazard Element from American Planning Association's Growing Smart Initiative: Information on what should be included in a comprehensive plan in order to include natural hazards in ongoing community planning activities.

Mitigation Recovery Exercises for Flood, Hurricane, and Earthquake Scenarios: These three tabletop exercises are available on CD-ROM. Regional or State staff can assist communities in performing 1-day exercises to make community staff aware of post-disaster recovery and mitigation issues. These exercises also serve as the basis of mitigation planning workshops that have been held in Rhode Island and North Dakota.

Long-Term Recovery Action Plan: The Action Plan prepared by the President's Long-Term Recovery Task Force documents an interagency, interdisciplinary approach to long-term recovery that can be used by regions and States.

Project Impact Guidebook: The guidebook describes the purpose and process of Project Impact. It describes each of the four phases in detail, including identifying community partners, assessing risks, identifying mitigation measures, and planning and conducting media events.

Project Impact Tool Kit: The Project Impact Toolkit supplements the Project Impact Guidebook by providing practical tips, resources, and other information learned from implementation of the initiative so far. It provides these tips, tools, and other resources in the context of four phases of the Project Impact process.

Planning for a Sustainable Future: The Link Between Hazard Mitigation and Livability (FEMA 364): The first of two publications FEMA has prepared to highlight and promote the vital connection between disaster resistance and livability. It focuses on a vision of sustainable communities and shows the reader how disaster prevention planning before a disaster strikes and/or a planned recovery process after a disaster can serve as a catalyst for creating more sustainable communities throughout the nation.

Rebuilding for a More Sustainable Future: An Operational Framework (FEMA 365): The second publication develops the themes covered in Planning for a Sustainable Future: The Link Between Hazard Mitigation and Livability into more detailed practical guidance for use during the post-disaster recovery process. This guidebook is intended to be used by staff from FEMA and State agencies who will be working directly with communities after a disaster. It is also intended to assist the local officials and citizens of affected communities to understand how the decisions they make and the actions they take as part of their recovery can ultimately result in a more sustainable community.

CRS Example Plans: A free publication that provides information, examples, and model plans for all communities.

VI. DATA COLLECTION AND TRACKING

Improving Automated Information Management

FEMA has been working to develop an FMA database. This database, which is part of the National Emergency Management Information System, will be further refined to include an application module and complete connectivity with FEMA's Integrated Financial Management Information System. A system will be implemented for tracking repetitive loss properties. Repetitive loss data will be incorporated into the 5-year map update process to help identify areas that need re-mapping.

Advancing Data Collection Methods

While project eligibility requirements remain consistent, changing the amount or method of data collection is a viable method to streamline and speed program delivery. The National Flood Insurance Reform Act and implementing regulations for the FMA program both require that FMA projects be cost-effective. Current policy requires that a benefit-cost analysis (BCA) be performed on every structure mitigated with FMA funds. The table below shows on a regional basis, all substantially damaged structures included in FMA projects were cost effective with a 2.21 benefit-cost ratio.

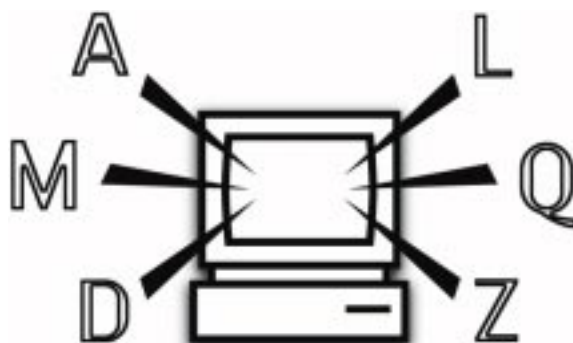
Table 3: Benefits and Cost of Acquisition of 1,979 Substantially Damaged Structures

Benefits	Costs	Net Benefits
\$173,884,837	\$78,726,487	\$95,158,350

Benefit Cost Ratio: 2.21

Conducting Joint Review of Local Mitigation Planning

A joint review is underway with the FEMA Office of the Inspector General to assess the quality of local plans. The overall goal of this review will be to identify best planning practices of high-achieving communities to translate these practices into other communities. Results will also influence the development of planning guidance and policy.



FUTURE INITIATIVES

Providing Information and Establishing Outreach Programs

FEMA will improve the distribution of data on the location of and risk to individual repetitive loss properties to its State and community partners. An outreach and technical assistance package will be developed and distributed to repetitive loss communities with target buildings. Workshops on mitigation alternatives will be conducted for these communities.

Efforts continue to educate the public on hazard mitigation measures and grant availability. Efforts will soon be underway to translate the FMA brochure and perhaps other materials into Spanish and other languages.

FEMA will work to make final the interim FMA regulations in coordination with ASFPM and NEMA.

Continue Planning Fellowship

FEMA will continue the Planning Fellowship Program in FY 2001 with an emphasis on sustainability and livability planning.

Guidance Update

FEMA will update the FMA Guidance Document (FEMA 299) for regions and States during FY 2001. This will be available as a printed publication and electronically over the Internet and at the NEMIS Reference Library. It will present State and regional perspectives, and more detailed guidance on financial management, data processing, and project oversight and implementation.

Electronic Application and Applicant Handbook

FEMA will develop an electronic application and grants management process using the NEMIS FMA database. The goal of this project will be to develop an “e-grant application” for FMA project, planning, and technical assistance grants, to be used by State and local governments.

FEMA will develop an applicant’s handbook for communities applying for planning, project, and technical assistance grants. This document will be modeled after various applications used by the FEMA regions and States, and will be consistent with the NEMIS Mitigation Module. This document will be available as a printed publication, and complement the NEMIS electronic application.

How-To Manuals for Planning

FEMA is developing a series of manuals that will guide State and local officials through processes involved in planning for mitigation of natural hazards. Some of the topics include:

- Hazard identification and risk assessment – what it is and how to do it.
- How to use the results of hazard identification and risk assessment in mitigation planning.
- Using benefit-cost analysis throughout the mitigation planning process.
- Using Hazards U.S. (HAZUS) in mitigation planning. HAZUS is a hazard identification and risk assessment tool available to all States.
- Maintaining support for the planning process.
- Overview of the planning process.

FMA Success Stories

City of Kinsley, Kansas

Planning Grant

“...the 1998 American Planning Association Small Town and Rural Planning Award for Excellence.”

The City of Kinsley, Kansas, received the 1998 American Planning Association Small Town and Rural Planning Award for Excellence. The Comprehensive Plan for Kinsley was recognized for the effective integration of flood mitigation planning and community involvement.

The City of Kinsley received a 1998 FMA planning grant to assist the City in developing a community flood mitigation plan.

The City of Kinsley is located almost entirely within the 100-year floodplain of the Arkansas River, Big Coon Creek, and Little Coon Creek. The City recognized that managing the floodplain was not only essential to protect the lives and properties of its citizens, but also affected a range of community issues such as economic development, housing, future land use, public facilities, downtown revitalization, and tourism development. As a result, the City elected not to develop a separate flood mitigation plan, but to incorporate flood mitigation management into the community's comprehensive growth plan.

The community planning process was exemplary. The citizens of the community developed the Kinsley Comprehensive Plan. Community participation was a critical feature of the planning process. A community team conducted a systematic, comprehensive assessment of community needs and opportunities. Community forums educated citizens and enabled them to identify issues, establish goals, evaluate alternatives, and develop the strategies. As a result, the community reached a consensus regarding where they wanted to be as a community and how they wanted to attain these goals.

Project Costs: The City combined \$6,450 of FMA funds with \$4,387 of Kansas Department of Commerce and Housing Strategic Planning Grant funds and \$10,000 of local funds to update the community's comprehensive plan.

FMA Success Stories

Philippi, WV

Acquisition Project Grant

“First, residents developed an FMA plan that was comprehensive and purposeful and identified all flood hazards.”

Background: Philippi, West Virginia, is a town of 3,100 residents that doesn't boast a large municipal budget. But never underestimate the drive of a small town working together, especially when individuals accept responsibility for mitigation actions. First, residents developed an FMA plan that was comprehensive and purposeful and identified all flood hazards. It was created as a proactive guide to community mitigation efforts, independent of funding source requirements. Then, this town identified all potential funding sources and carefully matched program requirements to mitigation needs. Project by project, the people of Philippi are making their town a safer place to live.

Project: In 1997, six homes that suffered repeated flood damage were acquired using FMA funds. In 1999, two more homes were removed from the same area. This was the first FMA project approved for this community and was processed smoothly by all those who participated in it. The acquired properties were contiguous to an existing community park, a fact that enhanced their appeal as a FMA project. Not only have people been relocated out of harm's way, but the properties have been integrated into the park creating a significantly larger open green space.

Benefits: During the previous five floods, these six homes sustained more than \$447,710 in combined property damage. Additional savings result because the need for emergency services, disaster grants, and debris removal does not exist. But, in a project like this one, the financial benefits are the icing on the cake. What was once a dangerous and costly flood area is now a newly enlarged recreational park that has become a valuable meeting place enjoyed by all generations of Philippi residents.

Housing for the elderly is located across the street from the park. When those residents were asked to contribute suggestions for park use, they expressed an interest in garden spaces. As a result, local vocational students built 18 four-foot-square garden boxes to serve as individual gardening spaces for interested senior citizens. The boxes were added to park landscaping by members of Future Farmers of America in yet another demonstration of community teamwork. Landscaping currently includes a gazebo, popularly requested as a wedding site, and once the park is complete will also include a 1-mile walking track that is wheelchair accessible, a playground, and a basketball/roller hockey court.

Project Cost: For Phase I, this project was funded with \$148,420 of FMA project funds, and \$49,473 of local matching funds. For Phase II, this project was funded with \$160,740 of FMA project funds, and \$64,360 of local matching funds.

FMA Success Stories

Ames, Iowa

Commercial Floodwalls and Backfill

Grant Project

“Iowa now has hundreds of small communities interested in community mitigation planning.”

Background: Ames, Iowa, since designated a Project Impact community, is an enlightened community that has embraced the concept of mitigation. They have adopted floodplain regulations that are more stringent than those required by the State of Iowa. The State coordinates quarterly meetings of the Mitigation Team, which includes State and local members. They conduct a cohesive review of available funds from the HMGP, FMA, NRCS, and USACE to determine how they may best fund their mitigation activities.

Project: Eight commercial properties alongside Squaw Creek were subject to repeated low-level flooding, and as a result, were frequently unable to operate. The owner of Happy Joe’s Pizza decided to construct a floodwall that protected his business and allowed him to stay in operation when neighboring businesses were closed for cleanup and repair. The remaining businesses met with city officials to request the establishment of a program that would build floodwalls. In 1998, FMA funds were made available to meet the needs of these businesses. This project is ongoing.

Benefits: This project had a benefit-to-cost ratio of 1.09, indicating that the economic savings will total \$170,000. Additional benefits, not calculated in the original benefit-cost ratio, result from eliminating economic disruption in this area, and eliminating the cost of emergency services (average disaster grant in this area is equal to \$1,200 multiplied by approximately 30) and debris cleanup.

FMA planning money has been another strong tool in educating local planners about mitigation. Iowa now has hundreds of small communities interested in community mitigation planning.

Project Cost: For Phase I, this project was funded with \$117,090 of FMA project funds, and \$42,460 of State and local matching funds. For Phase II, this project was funded with \$117,220 of FMA project funds, and \$39,090 of State and local matching funds.

FMA Success Stories

La Junta, Colorado

Acquisition-Demolition Project Grant

“...damage to the city was drastically reduced as a result of this project...and the town plans to apply for HMGP funds as a result of the successful use of FMA money.”

Background: The City of La Junta, CO, historically suffered flooding from relatively average thunderstorms. Although this community was not a repetitive loss community, there was a clear benefit to using FMA money in this city.

The community wanted to rid itself of a salvage yard that posed risks to the city. When this area flooded, both commercial salvage buildings suffered damage and yard debris floated downstream to a bridge on the Arkansas River. This debris had the potential to block the bridge and cause major flooding in residential areas.

The owners recognized the threat posed to the city and were willing to cooperate but could not absorb the demolition costs. Community funding and FMA money made the solution possible.

Project: FMA helped to fund the demolition of two commercial structures and the removal of salvage yard debris.

Benefits: This project has a 1.663 benefit-cost ratio. As a result of this project, no structures exist in this area, thereby eliminating the need for emergency services or expenditures to aid those owners.

This area has flooded since the completion of the FMA project. According to City Manager Rick Klein, the damage to the city was drastically reduced as a result of this project. In addition, he says they feel confident that floating debris now poses no risk to the downstream bridge.

The residents of La Junta are interested in implementing other mitigation measures and the town plans to apply for HMGP funds as a result of the successful use of FMA money. Additional projects have been identified for future FMA funds.

Project Cost: This project was supported with \$100,000 of FMA project funds, and matched with \$33,333 of local funds.

FMA Success Stories

Indian Shores, Florida

Elevation Project Grant

“Their decision to elevate the structure an additional 2 feet above the Base Flood Elevation obtained a substantial flood insurance policy premium reduction for them.”

Background: Dave and Sandy Shuler of Indian Shores, Florida, recently received mitigation assistance through FMA. Their home had experienced two repetitive losses within a 3-year period. The first loss was in January 1993, with structural damage amounting to \$13,379 and contents damage amounting to \$1,250. The second loss was in October 1996, with structural damage amounting to \$15,468 and contents damage amounting to \$5,070. The total of the two losses the Shulers experienced was \$35,168.

Project: The structure has been elevated 2 feet above the Base Flood Elevation (BFE). Their decision to elevate the structure an additional 2 feet above the BFE obtained a substantial flood insurance policy premium reduction for them and further reduced the chance of future losses.

Benefits: The benefit-cost ratio for this project is 1.187. The structure was elevated out of harm's way, thereby eliminating the need for emergency services or expenditures to aid the owners.

Project Cost: The home on 1911 Whispering Pines Drive was elevated with \$32,021 of FMA project funds, and \$10,674 of local funds.

Northeast Neighborhood News, Inc.

St. Petersburg, FL: “...When you’ve been through more than one bad flood, it’s not a matter if there will be another one, but when,” explained Segur. “I was lucky to have found out about this grant program.”

Savannah, Georgia

Acquisition Project Grant

“These properties were repetitive loss properties... targeted in the City’s Comprehensive Drainage Plan.”

Background: The City of Savannah, with a Community Rating System (CRS) rating of 8, is acquiring 4 properties prone to repetitive flood losses.

Project: 4 properties are being acquired in Savannah, Georgia using FMA project grant funds. These properties were repetitive loss properties that were targeted in the City’s Comprehensive Drainage Plan.

Benefit: The elimination of repetitive flood damage to target structures and other at-risk NFIP-insured structures.

Project Cost: This project is supported with \$121,067 of FMA project funds and \$40,353 of local matching funds from homeowners.

FMA Success Stories

Southeastern Ouachita Parish, Louisiana

Acquisition Project Grant

“There is an expected saving of \$257,228 in expected annual damage claims.”

Background: Ouachita Parish is one of the highest repetitive loss communities in the nation. The community has over 300,000 flood insurance policies in place and has experienced an estimated \$1.3 billion in flood insurance claims since 1978. Ouachita Parish experienced record flooding in FY 1988, 1989, and 1991, and emergency declarations in 1996 and 1997.

Project: Fifteen repetitive loss structures are being acquired in the City of Monroe and the City of West Monroe, located in the southeastern part of Ouachita Parish.

Benefits: Future flood damage in the target area is virtually eliminated. There is an anticipated savings of \$257,228 in expected annual damage claims. The benefit-cost ratio for the entire project is 1.734.

Project Cost: This project was funded with \$1,000,000 of FMA project funds, and \$333,550 of local matching funds.

Denton, Texas

Acquisition Grant Project

“...using FMA project grant funds to acquire five structures adjacent to the city’s main drainage canal.”

Background: The State of Texas is ranked second among States with the highest number of target properties. The City of Denton is an NFIP CRS community with a rating of nine.

Project: The City of Denton is using FMA project grant funds to acquire five structures adjacent to the city’s main drainage canal.

Benefit: The elimination of repetitive flood damage to target structures and other at-risk NFIP-insured structures.

Project Cost: The Federal share for the project is \$147,065, with a cost share of \$49,002 of State and local matching funds.

FMA Success Stories

Eudora, Kansas

Retrofitting Project Grant

“...everyone worked together to package the funds and implement the solution.”

Background: During the Midwest Floods of 1993, heavy rains left between 4 and 8 feet of floodwater in the homes of some Eudora residents. Upstream development contributed to flash flooding on a regular basis.

The proposed project identified two inadequate drainage structures located within the Eudora city limits. Douglass County is responsible for one of the structures, and the City of Eudora is responsible for the other.

The 10th Street culvert lacked the capacity to handle storm runoff from relatively frequent storms without flooding several houses just upstream of the culvert. The 7th Street culvert, downstream of the 10th Street culvert, could not handle a 100-year flood without flooding a house just upstream of the culvert.

Project: FMA funds were granted to replace the 10th Street culvert upon the condition that the downstream 7th Street culvert be upgraded prior to implementation of FMA grant.

Because the county and the city were each responsible for one of the culverts, everyone worked together to package the funds and implement the solution. The 10th Street culvert was funded with county, city, and FMA money and the 7th Street culvert was funded with local and CDBG funds.

Benefits: The benefit-cost ratio for this project is 2.34. Begun in December 1997 and completed in April 1999, the project provides relief for five residences and a significant amount of traffic, and impacts numerous other residential units along the tributary. The project contributes significantly to maintaining the value of the existing residential properties. At least \$428,915 will be saved by this mitigation measure. This is the amount of the total values of the residential improvements that are flooded on a 2- to 3-year basis.

In addition, the project will enable passage on the roads during heavy rains, and reduce the number of insurance and assistance claims made by the residential property owners.

Project Cost: This project was supported with \$40,000 of FMA project funds, and \$80,000 of matching funds from the county and the city.

FMA Success Stories

Mandeville, Louisiana

Elevation and Retrofitting Project Grants

“...eight of these structures have experienced two or more losses that exceed the building’s fair market value.”

Background: Mandeville is an NFIP CRS participating community with a rating of nine, and is located in St. Tamany Parish, one of Louisiana’s highest repetitive loss communities. The City has received FMA project grant funds in FY 1997, 1998, and 1999.

Project: The City of Mandeville is acquiring six repetitive loss structures, and elevating or floodproofing 10 structures. Three of these structures have received four or more insured repetitive losses since 1978, and eight of these structures have experienced two or more losses that exceed the building’s fair market value. Three of these structures were substantially damaged.

Benefits: The elimination of flood damage to target areas, and elimination of specific repetitive loss structures.

Project Cost: The city has received a total of \$1,289,182 of FMA project grant funds for three projects, which is being matched with \$429,727 of State and local matching funds.

Vicksburg, Mississippi

Acquisition Project Grant

“...the effectiveness of combining FMA money with other mitigation funding sources.”

Background: The State of Mississippi is ranked eighth among States with the highest number of target properties with 313 in total.

Project: FMA project grant funds are being used to acquire and demolish 13 structures. These structures were included in a larger FEMA Hazard Mitigation Grant Program (HMGP) project to remove 35-40 repetitive loss properties, demonstrating the effectiveness of combining FMA money with other mitigation funding sources. Seven of the 13 structures have experienced two or three insured property losses that exceeded the building’s value.

Benefit: The elimination of repetitive flood damage to target structures and other at-risk NFIP-insured structures.

Project Cost: \$341,663 of FMA project funds were obligated for this project. This amount is being matched with \$113,890 of State and local funds.

The Vicksburg Post

Vicksburg, MS, printed: “The county is working under the FEMA HMGP and FMA to buy the property, demolish structures, and keep the land clear. The idea is to break the cycle of repeated hits on the taxpayer-subsidized National Flood Insurance Program.”

FMA Success Stories

Jefferson Parish, Louisiana

Elevation and Retrofit Project Grants

“...both an elevation project and a drainage improvement project that target NFIP repetitive loss structures.”

Background: Jefferson Parish, Louisiana, is the highest repetitive loss community in the United States with 3,345 repetitive loss structures with total claims payments of \$140,801,807 as of the date of this publication.

Project: Jefferson Parish received FMA funds for both an elevation project and a drainage improvement project that target NFIP repetitive loss structures. The project was for improvements to Cain’s Ditch, located in River Ridge, Louisiana. Improvements are being made to more adequately drain water through Cain’s Ditch, which eventually drains into the Soniat Canal, during high-velocity flooding. Improvements include installation of a concrete “U” channel and a reinforced pipe arch. This project should protect many residential structures in the area as well as some businesses from future flooding.

Jefferson Parish is elevating two repetitive loss structures using FMA project grant funds. One structure suffered at least four repetitive losses since 1978, and the other suffered two or three losses that exceed the building’s fair market value.

Benefit: The elimination of repetitive flood damage to target structures and other at-risk NFIP-insured structures.

Project Cost: Jefferson Parish received FMA project grant funds for the Cain’s Ditch Drainage Project. The Federal share obligated was \$573,075. The State and local cost share was \$191,025. Jefferson Parish received \$123,900 of FMA project funds for the elevations. The State and local cost share amount was \$41,300.

Si View Acres, Washington

Elevation Project Grant

“ ...experienced two to three flood losses that exceed the building’s fair market value.”

Background: The State of Washington has 308 repetitive loss structures with associated claims payments totaling \$7,266,611. Si View Acres is located in King County, which is a CRS participating community.

Project: The State has awarded the community of Si View Acres an FMA project grant to elevate six houses along the Snoqualmie River. All houses have experienced two to three flood losses that exceed the building’s fair market value.

Benefit: The elimination of repetitive flood damage to target structures.

Project Cost: In FY 1999, Si View received an FMA project grant of \$242,130 that was matched with \$80,709 of State and local matching funds. In FY 2000, Si View received an FMA project grant of \$190,500 that was matched with \$63,500 of State and local matching funds.

FMA Success Stories

Beatrice, Nebraska *Acquisition Project Grant*

“It was a winning solution for everyone concerned.”

Background: During the 1970s and early 1980s, the City of Beatrice, Nebraska operated an independent program to clear the Big Blue River floodplain of over 150 properties. They also implemented regulations that prohibit building in the floodway. This voluntary acquisition program was generally successful. However, a few low-income structures were left behind. The cost of comparable housing had risen dramatically and these residents were unable to relocate without financial assistance.

Project: FMA funds were used to acquire the three remaining structures, and to assist the owners in finding substitute housing. Now a large recreational space exists, with just a few properties remaining along the edge of the park.

Benefits: This project had a benefit-cost ratio of 1.510 that projected a savings of \$462,731. The acquisition was initiated in September of 1997 and is ongoing. “Some were able to relocate to better housing by using the funds they got from the acquisition,” said Robert Feit, Director of Administrative Services for the Beatrice Public Works Department. “It was a winning solution for everyone concerned.”

Project Cost: The project was funded with \$117,360 of FMA project funds, and \$38,728 of local matching funds.

FMA Success Stories

Harris County, Texas *Acquisition Project Grant*

“...Harris County proposed to purchase 10 more homes in the same area.”

Background: Harris County, Texas, is ranked fourth among communities with the highest number of repetitive loss structures in the United States. There are 656 repetitive loss structures with claims payments totaling \$51,493,866.12, as of the date of this publication.

Project: Harris County has received three FMA project grants for acquisition projects during FY 1997, 1999, and 2000. The 1997 and 1999 projects involved the acquisition of approximately 19 single-family residential structures located in Lake Cypress Estates and the Grantwood Subdivision. At least one structure is located directly in the Cypress Creek floodway. The other homes are located in the 100-year floodplain. In FY 2000, Harris County proposed to purchase 10 more homes in the same area.

Benefit: The elimination of repetitive flood damage to target structures and other at-risk NFIP-insured structures. The benefit-cost ratios for the 1997, 1999, and 2000 projects were respectively 1.42, 1.551, and 1.308.

Project Cost: For FY 1997, the FMA project amount was \$635,670, with matching funds amounting to \$211,890 from State or local sources. For FY 1999, the FMA project amount was \$1,197,690, with \$872,886 of matching funds from State or local sources. For FY 2000, the FMA project amount was \$1,037,790, with \$345,930 from State or local sources.

FMA Success Stories

Village of Freeport, NY

Elevation Project Grant

“...teamwork and interagency cooperation from Federal, State, and local governments...”

Background: The Village of Freeport, 4.5 square miles on Long Island’s southern shore, is densely populated and highly desirable for its waterfront beauty and its proximity to New York City.

Project: Rad Anderson, of the New York State Emergency Management Office (SEMO), advised Freeport that assistance is available to those communities that have a flood mitigation plan, and provided valuable guidance during the development and adoption of a local plan. Once that plan was in place, Freeport requested funding to elevate 30 homes that were identified as repetitive loss structures. Three structures will be mitigated with FMA funds.

The project management team, comprised of representatives from the Village Engineering, Public Works, and Building and Electric Departments, are credited with the progress. However, this work could not have been accomplished without the unrelenting assistance of FEMA and SEMO. This project has proven that teamwork and interagency cooperation from Federal, State, and local governments is very important.

Benefit: The benefit-cost ratio of this project is 2.563. Residents will stay in their homes with peace of mind. In fact, since this project began implementation, the only two storm events that resulted in flooding in this area were Hurricane Gloria and the 1991 October storm, which was of a 100-year magnitude.

The structural elevation project, initiated in December of 1997, is close to completion and has been complemented by road elevations, storm drains with backflow valves, and more stringent building codes regarding wind load, minimum elevation on new construction, and bulkhead elevation. This Project Impact community, combining Federal assistance with local bond initiatives, demonstrates the commitment to hazard mitigation that will help to end repetitive flood damage.

Project Cost: The FMA project amount was \$1,049,080, with applicant matching funds amounting to \$349,693, for a total project cost of \$1,398,773.

FMA Success Stories

Shishmaref, Alaska

Acquisition-Relocation Project Grant

“As a condition of receiving the \$600,000 FMA grant, the community...has developed a mitigation plan...”

Background: The incorporated City of Shishmaref is located on the Seward Peninsula on Sarichef Island, about 5 miles from the mainland. The current population of Shishmaref is 542, primarily Native Alaskans. It is a traditional Eskimo village with a fishing and subsistence lifestyle, and over one-fourth of the residents live below the poverty level. Shishmaref’s primary link to the rest of Alaska is by air, although many residents own boats for trips to the mainland.

Sarichef Island, a barrier island, is composed of fine, easily erodable sand and is not considered a highly stable feature. The island is roughly 450 years old. Many barrier islands in the area are slowly migrating landward, with a long-term erosion rate on the seaward side of Sarichef estimated between 5 to 15 feet per year. A serious storm in October 1997 caused significant erosion damage in Shishmaref with erosion over 100 feet in some areas. The Alaska Division of Emergency Services (ADES) managed the recovery effort from this event as a State disaster, with no FEMA assistance.

Project: As a condition of receiving the \$600,000 FMA grant, the community, in conjunction with the Alaska Department of Community and Regional Affairs (DCRA), has developed a mitigation plan to address the erosion risk, and long-term solutions to these problems. DCRA has worked closely with the community and other State agencies to attempt to continue long-term aid to this area, so that new structures are not placed in an area of erosion risk. Funds for this project were obligated to Alaska on June 19, 1998, and will be used to relocate nine structures back from the edge of the bluff.

Benefits: The elimination of erosion damage to at-risk NFIP-insured structures.

Project Cost: The Federal share for the project is \$600,000, with a local matching amount of \$200,000.

CONCLUSION

This report documents the significant benefits of pre-disaster planning. In keeping with Project Impact, FMA provides the basis for communities to reduce their losses before disaster strikes.

FMA has joined in partnership with State and local governments, professional associations, and individual homeowners to implement mitigation throughout the country. FMA program accomplishments show significant progress toward reducing repetitive flood losses. Accomplishments include:

- Using FMA funds to mitigate repetitive flood losses for 885 families, with many more mitigation projects currently underway.
- Targeting (approximately) 10,000 repetitive loss properties for future mitigation measures under FMA, HMGP, and Project Impact.
- Awarding 225 project grants and 44 technical assistance grants to 49 States and territories.
- Awarding 159 planning grants, to 44 States and territories.
- Approving flood mitigation plans in 83 States or communities, securing the way for mitigation projects and a more sustainable future for these areas.
- Piloting a Managing State concept, in partnership with Florida, for FMA to speed the delivery of grant funds to the State and local level. This concept will be further tested in North Carolina and other selected States in FY 2001.
- Deploying a wide array of training courses in cooperation with EMI for regional and State staff on topics such as benefit-cost analysis, environmental review, grants administration, and database management.
- Initiating a joint review with the FEMA Office of the Inspector General on local mitigation planning to identify best practices of high-achieving communities, and to translate these practices to other communities.
- Creating a National Fellowship Program to promote and support the integration of natural hazard mitigation into professional planners' education and work. Two fellows who were appointed in FY 2001 are actively working with communities to develop plans and identify opportunities for projects under FMA, HMGP, and Project Impact.
- Streamlining information management by developing advanced software modules for use in the NEMIS database.
- Developing state-of-the-art mitigation planning tools.
- Increasing public awareness of hazard mitigation concepts and funding.

As this report was in its final stages of preparation, Congress passed the Disaster Mitigation Act of 2000 (P.L. 106-390). This Act, for the first time, authorizes pre-disaster mitigation planning and provides funding for State and local planning in the post-disaster environment through the HMGP. We believe this new legislation in concert with FMA will provide a powerful influence in directing attention and resources to the nation's floodprone communities. It will also serve as another resource for States and communities to develop comprehensive strategies for mitigating target properties, and hence reduce repetitive loss counts across the nation.

APPENDIX: FMA BASE ALLOCATIONS

		1997	1998	1999	2000	2001	TOTAL
Region I	Connecticut	\$208,000	\$224,500	\$255,800	\$240,300	\$234,800	\$1,163,400
	Maine	128,400	130,500	133,300	131,400	130,700	654,300
	Massachusetts	296,200	310,700	407,500	381,100	366,200	1,761,700
	New Hampshire	119,500	121,600	122,500	122,800	122,400	608,800
	Rhode Island	133,100	135,200	138,400	136,300	136,100	679,100
	Vermont	115,200	115,700	116,600	116,600	117,500	581,600
		\$1,000,400	\$1,038,200	\$1,174,100	\$1,128,500	\$1,107,700	\$5,448,900
Region 2	New Jersey	676,000	714,300	911,400	870,300	911,600	4,083,600
	New York	678,100	727,400	738,500	670,100	644,800	3,458,900
	Puerto Rico	248,000	274,100	222,100	245,400	246,200	1,235,800
	Virgin Islands	120,500	121,900	122,400	123,900	126,000	614,700
		\$1,722,600	\$1,837,700	\$1,994,400	\$1,909,700	\$1,928,600	\$9,393,000
Region 3	Delaware	141,100	143,000	150,100	155,600	154,100	743,900
	District of Columbia	110,700	111,200	111,800	111,400	111,300	556,400
	Maryland	188,100	200,400	213,000	213,300	211,600	1,026,400
	Pennsylvania	307,300	344,100	366,200	336,900	347,700	1,702,200
	Virginia	240,100	266,800	295,400	285,500	306,800	1,394,600
	West Virginia	196,900	233,200	267,400	248,100	231,300	1,176,900
		\$1,184,200	\$1,298,700	\$1,403,900	\$1,350,800	\$1,362,800	\$6,600,400
Region 4	Alabama	210,100	218,000	216,000	312,100	299,100	1,255,300
	Florida	2,497,200	2,784,000	3,178,100	3,243,200	3,233,100	14,935,600
	Georgia	202,900	220,500	237,900	256,500	278,000	1,195,800
	Kentucky	179,600	194,400	233,500	223,500	217,400	1,048,400
	Mississippi	360,000	374,300	333,500	342,500	321,400	1,731,700
	North Carolina	273,500	341,700	441,600	566,800	843,000	2,466,600
	South Carolina	314,000	332,400	378,900	374,300	382,300	1,781,900
	Tennessee	151,200	154,000	159,200	160,000	157,600	782,000
		\$4,188,500	\$4,619,300	\$5,178,700	\$5,478,900	\$5,731,900	\$25,197,300
Region 5	Illinois	330,200	352,400	300,800	272,800	257,700	1,513,900
	Indiana	177,300	184,200	190,400	187,300	181,600	920,800
	Michigan	175,100	176,000	167,400	164,700	161,400	844,600
	Minnesota	130,900	144,700	149,600	136,400	134,500	696,100
	Ohio	205,500	216,500	229,000	227,800	220,800	1,099,600
	Wisconsin	128,900	131,800	137,100	168,100	164,000	729,900
		\$1,147,900	\$1,205,600	\$1,174,300	\$1,157,100	\$1,120,000	\$5,804,900
Region 6	Arkansas	146,000	149,200	147,400	145,300	142,500	730,400
	Louisiana	1,713,800	1,812,500	2,096,900	2,077,000	1,983,100	9,683,300
	New Mexico	124,000	125,500	126,900	126,700	126,300	629,400
	Oklahoma	173,700	177,400	184,200	174,200	170,100	879,600
	Texas	1,198,200	1,269,000	1,203,500	1,250,100	1,187,000	6,107,800
		\$3,355,700	\$3,533,600	\$3,758,900	\$3,773,300	\$3,609,000	\$18,030,500
Region 7	Iowa	143,300	143,200	152,400	147,800	157,800	744,500
	Kansas	140,500	142,800	141,400	146,100	145,500	716,300
	Missouri	447,400	467,100	343,400	313,000	295,300	1,866,200
	Nebraska	143,600	147,600	143,400	139,500	138,700	712,800
		\$874,800	\$900,700	\$780,600	\$746,400	\$737,300	\$4,039,800

APPENDIX: FMA BASE ALLOCATIONS

		1997	1998	1999	2000	2001	TOTAL
Region 8	Colorado	130,000	131,400	135,000	134,500	134,000	664,900
	Montana	116,700	125,900	116,600	116,300	115,700	591,200
	North Dakota	123,000	136,000	131,900	124,700	125,100	640,700
	South Dakota	114,500	117,800	118,700	117,800	118,100	586,900
	Utah	114,100	114,900	113,800	113,900	113,800	570,500
	Wyoming	<u>112,800</u>	<u>115,000</u>	<u>114,000</u>	<u>113,500</u>	<u>113,600</u>	<u>568,900</u>
		\$711,100	\$741,000	\$730,000	\$720,700	\$720,300	\$3,623,100
Region 9	American Samoa	110,000	110,200	110,200	110,400	110,000	550,800
	Arizona	150,200	153,900	159,800	155,600	155,500	775,000
	California	591,100	656,400	968,800	930,100	873,600	4,020,000
	Hawaii	181,600	186,600	193,100	188,800	183,300	933,400
	Nevada	126,700	127,100	130,700	129,100	110,000	623,600
	No. Mariana Islands	<u>110,300</u>	<u>110,000</u>	<u>110,000</u>	<u>110,000</u>	<u>128,800</u>	<u>569,100</u>
		\$1,269,900	\$1,344,200	\$1,672,600	\$1,624,000	\$1,561,200	\$7,471,900
Region 10	Alaska	113,700	114,300	114,800	114,800	114,800	572,400
	Idaho	118,200	123,500	119,600	119,100	119,400	599,800
	Oregon	137,600	149,100	165,100	168,700	174,100	794,600
	Washington	<u>175,400</u>	<u>194,100</u>	<u>223,400</u>	<u>208,000</u>	<u>203,400</u>	<u>1,004,300</u>
		\$544,900	\$581,000	\$622,900	\$610,600	\$611,700	\$2,971,100